BRUHAT BANGALORE MAHANAGARA PALIKE

YELHANKA ZONE ELECTRICAL DIVISION

Name of work :-Detailed Estimate for Providing Street Lights and electrical accessories in ward no 8 Kodigehalli.

Budget Head .....

Division No..... Estimate No. 49/17-18 For Rs. **5000000.00**

Sl.No.	SR Page & SL No	Description of Work	Qty.	Rate Rs.	Unit	Amount
1	27/4.36.1	LED Street light. Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs. 50000 hr. @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4 KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools., LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI 75+. housing with supplier word mark / name shall be engraved / Embossing on the die cast housing / body part. . Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacturer. Suitable for A1/A2 Roads as per IS 1944 Part I & Part II. 90 Watts	106	31250.00	Each	3312500.00
2	26/4.35.3	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with				

		minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & FixtureEfficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.LED	25	18720.00	Each	468000.00
3	108/17.12	Supplying and Fixing of.....mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires. Using 32mm dia G.I.pipe	123	893.00	Each	109839.00
4	12/2.12.1	Wiring for lighting/power circuit using one of PVC insulated 1100v grade stranded **Aluminium** unsheathed wire single core/multi core cable in open or consealed system of wiring. a)4 sqmm.	300	7.50	Each	2250.00
5	108/ 17.5	Fixing halogen/ metal hallide /SVL/IL/LED flood light fittings over existing pole/ wall ceiling including clamps bolts nuts and wiring using sitable capacity wires	100	176.00	Each	17600.00
6	AR	Supplay erection testing & commissioning of Thiristor based single/ Three phase smart street light control and monitoring system Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure.7) Transformers: Customized step down transformers for various purposes.8) Wiring and other	1	51500.00	Set	51500.00

7	AR	Supplay and erection of Single phase Thyristor based smart street light control system consisting of following aquipments 1. Precise turn ON & OFF of street lights on pre programmed data 2. 2 x 16 character LCD display unit to display date, status ON Or OFF , turn ON & OFF time, 3. Keypad to set/edit ON & OFF time as per the end user 4. Microcontroller with Real Time Clock and associated hardware 5. 1 No, SCR 162 amps thyristor module for load switching mounted on an extruded alluminium heat sink 6. Thyristor Driver Card: Driver control circuit to switch ON & OFF the Thyristor module 7. Firmware: Firmware to control the hardware and display the required data 8. Power Supply: AC to DC conversion circuit required for the electronic circuitry and driver control card 9. Enclosure is made out of 18 swg CRCA ms sheet of size H480xW310XD200mm with luvers for Heat dissipation IP65 weather proof metal enclosure 10. Wiring & other components like wiring, connectors ,insulators, Alluminium Bus bar and 2 nos of 125 amps single pole MCB for main power Supply control	1	31860.00	Set	31860.00
8	2/1.1.3	Open Conduit Systeme: Supplying heavy gauge PVC conditpipe,.....dia confirming to IS 2509 with suitable size bends,junction boxes, adhesibve paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall stone structure or plug incase of brick walls and cement plastering damaged portionusing heavy gauge saddles at an interval of 700mm using NF screws.c)32mm dia 2.5mm thick	60	100.00	Mtrs	6000.00
9	56/7.6.4	Supplying of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy. Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & confirming to GTP of GROUP-A.2 X 25 + 1 X 25 SQ.MM.	100	143.00	Mtrs	14300.00
10	34/5.11	Supplying and stringing of ACSR Conductor (6/2.59mm Al +1/2.59mm Steel).	1000	30.00	Mtrs	30000.00
11	34/5.91	Supplying and Fixing ... including all Hardware's etc. complete as per the standard technical specification of BESCOM. A)11 KV Pin Insulator	29	44.00	Nos	1276.00
12		No. 8 Strain Insulator	10	14.00	Nos	140.00

13	50/6.41.1	Supply and Installation / Fixing / Provision of Pole box with HRC Fuse / MCB provision and suitable connector / terminal for 3 Ph / 1 Ph connections with Loop-In & Loop-Out terminals for 10 Sqmm / 25 Sqmm 3.5 C Al/Ar / Cu/Ar Cable and branch out 2.5 Sqmm 2 core Al/Cu PVC Insulated cable, enclosed in a Thermoplastic, Polystyrene enclosure, which should be shock proof, safe, IP65(Weather Proof), rust proof, dust proof, water proof having Internally Embedded Gasket with provision for cable entry through IP65 Thermoplastic, polyamide glands and/or grommets.200mmx200mmx98mm	11	2178.00	Each	23958.00
14	46/6.13.A.1	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) THREE POLE 100Amps25kA.	11	4044.00	Each	44484.00
15	64/7.21.7	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.25 sqmm Long Barrel	70	20.59	Each	1441.30
16	33/5.4	Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM 2 Pin 45x45x5mm -510mm	25	306.00	Nos	7650.00
17	55/7.4.4	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 4 core 16 sqmm	1400	140.40	Mtrs	196560.00
18	55/7.8.1	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct.6 sqmm to 16 sqmm	1400	10.80	Mtrs	15120.00
19	61/7.9.1	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) In soil(ordinary)	200	78.00	Mtrs	15600.00
20	61/7.9.4	Asphalt cutting	1000	117.00	Mtrs	117000.00
21	46/6.12.4	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947.100-125Amps	2	9915.00	Nos	19830.00
22	47/6.16	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 40-63Amps TPN	2	1936.00	Nos	3872.00

23	19. 32/9	Supplying and fixing of Twin Dial electro mechanical timer (without contactor) using necessary bolts, nuts and washers etc.. Group A, PWD SR 2007-08,	2	4200.00	Nos	8400.00
24	6/2.6.2	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper conductor single core wire in open or concealed system of wiring as per IS-694:1990 & confirming to GTP of GROUP -B.1.5 sqmm	300	15.90	Mtrs	4770.00
25	6/2.6.5	6 sqmm	10	53.20	Mtrs	532.00
		total Rs				**4504482.30**
		KRIDL Charges 11%				495493.05
		Mislenious				24.65
		Total				**5000000.00**

CERTIFICATE

1. The Place was inspected and work is essential.
2. The Provision made in the estimate is adequate and are necessary.
3. The Work comes in the BBMP limit and is legitimate charges on the Corporation Funds.
4. The rates in the Estimate is based on PWD (Elec) SR of 2014-15,BESCOM SR 2016-17 & Approved Rates .

Jr/Asst. Engineer (Elec)

Asst. Exe Engineer (Elec)
yelhanka zone
Bruhat Bangalore Mahanagara Palike

EXECUTIVE ENGINEER (ELEC)
YELHANKA ZONE

Administrative Sanction for Rs. 50.00 LAKHS
RUPEES. FIFTY LAKHS ONLY
is accorded under head P 3290 14TH FINANCE
COMMISSON WORKS PROVIDING
STREET LIGHTS AND MAINTENANCE
Registered as EE No. 01/2018-19 Subject
to conditions contained in enclosed memo
No. BBMP/EE/ELE/42/AS/01/2018-19
Dt 01.08.2018

Executive Engineer

Technical Sanction
Accorded For RS Fifty lacks only
Head of A/C. P-3290
CER NO TS/46/18-19 Dt. 22.08.18

TA SE (YNK)